

**Request to Temporarily Delay Further Examination:**

This application was submitted on July 8<sup>th</sup>, 2004 and in part, claims 1 through 11 were rejected based upon 88 USPQ2d 1385 In re Bilski U. S. Court of Appeals Federal Circuit – October, 2008. That case is now before the U. S. Supreme Court and oral arguments have been heard and are posted. One of the key issues is whether or not a claimed method must be tied to a particular machine or apparatus – see the posted oral arguments. As claims 1 through 11 are not tied to a particular machine or apparatus, and were drafted prior to the Federal Courts “Bilski” decision, applicant believes it is in the best interests of the USPTO and the applicant to postpone any action on this amendment until after the U.S. Supreme Court has issued its ruling relative to “Bilski”. This would prevent a re-examination of this application after the U.S. Supreme Court decision, pre-empt a re-examination filing by the applicant, not increase the USPTO’s current backlog and avoid extra costs to the applicant, which a re-examination would. Applicant would wave any patent extension rights caused by this postponement. In the light of due fairness to both the applicant and to the USPTO, and to the reduction of costs and backlog to both parties, it seems fair to applicant to ask for a

Serial No. 10/710,396 – McCormick, John K.

Attorney Docket 100

Response to August 18<sup>th</sup>, 2009 Office Action

Page 4 of 194

postponement of the analysis of the attached amendment in order to allow the U.S. Supreme Court to come to some type of conclusion as to “Bilski”.

Should the U.S Supreme Court find for the Appellate Court, a verbal conversation with the examiner could provide a way for an examiners amendment to cancel claims 1 through 11. If a different result is found by the U.S. Supreme Court, either a further amendment, or an examiners amendment, could be made to correct any errors in the drafting of claims 1 through 11. In either event, additional cost and time is avoided by both the applicant and the USPTO.

Serial No. 10/710,396 – McCormick, John K.  
Attorney Docket 100  
Response to August 18<sup>th</sup>, 2009 Office Action  
Page 5 of 194

**New Election of Species:**

The examiner did not provide a species-to-claim identification, or identified any generic claims in the first Office Action, mailed on March 27<sup>th</sup>, 2009, and made the election FINAL. Consequently, applicant made his own determination of the species-to-claim identification which was subsequently determined by the examiner to be in error, and as such applicant now elects species II, which includes claims 2, 13, 24 and 35, with traverse. The examiner stated in the second Office Action that claims 1, 12, 23 and 34, which are independent claims, are generic and, as such, are included.

**Traverse as to Species I, II, III, IV and V:**

In the second Office Action, the generic claims were identified as claims 1, 12, 23 and 34. Species I, was identified as claims 3, 14, 25 and 36 by the examiner as: “Performing a strategic definition, prioritizing and selection functions (paragraph 0035, Figure 3).” Species II was identified as claims 2, 13, 24 and 35 as: “Performing tradeoff identification, prioritization and selection functions (paragraph 0043, Fig. 4).” Species III was identified as claims 4, 5, 15, 16, 26, 27, 37 and 38 as: “Performing the objectives, goals and/or tradeoff thresholds definition as a range of values functions (paragraph 0049).” Species IV was identified as claims 6, 7, 8, 9, 10, 17, 18, 19, 20, 21, 28, 29, 30, 31, 21, 39, 40, 41, 42 and 43.

The generic claims provide for a “desired target value for the primary strategic objective” – Claim 1, d, Claim 12, d, I, or for a strategic objective measure - Claim 23, a, i and Claim 34, a. The claims of Species I all depend from the generic claims as having a further restriction on the desired target value or strategic objective measure by imposing a “range” on the “desired target value” or on the “strategic objective measure” and, as such, can not

Serial No. 10/710,396 – McCormick, John K.

Attorney Docket 100

Response to August 18<sup>th</sup>, 2009 Office Action

Page 7 of 194

exist as stand alone claims of Species I without the generic claims 1, 12, 23

and 34. Attempting to file a subsequent patent application or divisional

application on the Species I claims would give rise to an objection for

double patenting as the Species I claims cannot exist without the generic

claims of 1, 12, 23 and 34. As such, we believe Species I should be

included.

The election of Species II, claims 2, 13, 24 and 35 provides for the

identifying and “selecting the primary tradeoff measures” and an “allowable

tradeoff threshold limit” – Claim 2, d, e and f, Claim 13, a and b, Claim 24,

a, i and ii, and Claim 35, a and b.

Species III, claims 4, 5, 15, 16, 26, 27, 37 and 38, set “allowable ranges” for

the “tradeoff threshold limits” of the elected claims of Species II – Claim 4

a, Claim 5, a, Claim 15, a, Claim 16, a, Claim 26, a, i, Claim 27, a, I, Claim

37, a, and Claim 38, a. The “allowable ranges for the tradeoff threshold

limits” of the Species III claims can not exist without the “tradeoff threshold

limits” of the Species II claims and are further restrictions to the claims of

Species II. Filing a new patent application or a divisional application would

Serial No. 10/710,396 – McCormick, John K.  
Attorney Docket 100  
Response to August 18<sup>th</sup>, 2009 Office Action  
Page 8 of 194

result in an objection for double patenting. As such, we believe the Species II claims should be included.

The claims of Species IV, claims 6, 7, 8, 9, 10, 17, 18, 19, 20, 21, 28, 29, 30, 31, 32, 39, 40, 41, 42 and 43 all depend either directly or in multiple dependencies from the generic claims 1, 12, 23 and 34 provide further restrictions to those claims by having differing authority levels for each user of the generic and species I, II and III claims. For example, claim 6 refers back to generic claim 1. Claim 7 refers back to Species II, claim 2. Claim 8 refers back to Species I, claim 3. Claim 9 refers back to Species III, claim 4. Therefore the claims of Species IV provide further restrictions to the other generic and species claims and could not stand alone without those claims. Filing a new patent application or a divisional application would result in an objection for double patenting. As such, we believe the Species IV claims should be included.

The claims of Species V, claims 11, 22, 33 and 44 all further restrict the generic and Species I, II, III, and IV claims by tracking the users modifications to the original databases in terms of the users improvements or

Serial No. 10/710,396 – McCormick, John K.

Attorney Docket 100

Response to August 18<sup>th</sup>, 2009 Office Action

Page 9 of 194

detriment to the strategic target values or tradeoff limits of the generic and Species I, II, III and IV claims. The Species V claims can not stand alone without those claims. Filing a new patent application or a divisional application would result in an objection for double patenting. As such, we believe the Species IV claims should be included.

Serial No. 10/710,396 – McCormick, John K.  
Attorney Docket 100  
Response to August 18<sup>th</sup>, 2009 Office Action  
Page 10 of 194

## **Response to Objection to the Specification**

The examiner objected to the order of the Specification. That application was one of the first dozen in the beta test of the first electronic system proposed by the USPTO. I have no way of determining what happened to the order of the filing once I submitted the electronic application. However, in order to rectify the situation, I am re-submitting, in attachments, a copy of the original specification, an abstract, the original drawings and the original claims in the new ADOBE .pdf file format. Please see attached.

A marked up copy of the amended specification, a clean copy of the amended specification, a marked up copy of the amended claims and a clean copy of the amended claims are included in this response to the Office Action.

## **Response to Double Patenting Objection**

The examiner issued a non-statutory double patenting objection, for obviousness-type, as to claims 1, 12, 23 and 34 of the present application over claims 1, 7, 13 and 19 respectively of co-pending application No. 10/710,384 stating that the claims are not distinct because they recite common subject matter. These claims are provide below for comparison.

### **Present Claim 1:**

1. A method for determining if proposed modifications to existing planned activities are supportive of and consistent with an entity's strategic objective, comprising the steps of:
  - a. defining the strategic objectives;
  - b. prioritizing the said strategic objectives;
  - c. selecting the primary strategic objective;
  - d. selecting and saving a desired target value for the said primary strategic objective;
  - e. identifying the possible measures for the said primary strategic objective;
  - f. selecting the primary strategic objective measure;
  - g. determining the formula for calculating the said primary strategic objective measure if the said primary strategic objective measure does not already exist and saving the said formula for calculating the said primary strategic objective measure;

- h. temporarily modify the original databases to assume that the work or activity yet to be completed has been completed over a planning period and saving the modified databases;
- i. calculate the first expected results using the said modified databases as measured by the said primary strategic objective measure over the said planning period and saving the said first expected results;
- j. create an interactive version of the said original unmodified databases wherein users are allowed to modify the said interactive databases;
- k. use the said modified interactive databases to calculate the second expected results caused by the said interactive database modifications as measured by the said primary strategic objective measure for the said planning period and temporarily save the said second expected results;
- l. compare the said first expected results with said second expected results to determine if the said modifications to the said interactive database caused an improvement, a deterioration or was impact neutral to the said strategic objective target value and temporarily save the said comparison result;
- m. save the said modifications to the said interactive databases into the said original databases if the said second expected results or the result of the said comparison between the said first expected results and the said second expected results was an improvement to achieving the said strategic objective target value;

- n. do not save the said modifications to the said interactive databases into the said original databases if the said second expected results or the result of the said comparison between the said first expected results and the said second expected results was a detriment to achieving the said strategic objective target value;
- o. save or not save, the choice of saving or not saving to be determined by the said entity, the said modifications to the said interactive databases into the said original databases if the said second expected results or the results of the said comparison between the said first expected results and the said second expected results was impact neutral to achieving the said strategic objective target value; and
- p. periodically save the said modifications to the said interactive database into the said modified database and into the said interactive database if the said modifications were stored in the said original databases and repeating steps h, i, j, k, l, m, n and o above.

**Claim 1 (as presently amended) of application No. 10/710,384:**

1. (Amended) A method for determining order and/or lot sizes that are consistent with an entity's primary strategic objective, comprising the steps of:
  - a. selecting a primary strategic objective;
  - b. listing the possible strategic objective measures;
  - c. selecting the primary strategic objective measure from said list of possible strategic objective measures;

- d. running the material requirements planning (MRP), manufacturing resource planning (MRP II) and any other management information system (MIS) for a planning period as if the currently required activities and/or work were in fact already ordered and/or run per the existing activity schedule and ordering rules to determine a first expected output;
- e. determining the first expected results from said first expected output as measured in terms of said primary strategic objective measure;
- f. modifying said existing activity schedule by removing one of said currently required activities or work in said existing activity schedule and re-running said MRP, MRP II and any other MIS for said planning period as if the remaining activities and/or work were in fact already run per said existing activity schedule and said existing ordering rules to determine a second expected output;
- g. determining the second expected results of said modified activity schedule created in step f as measured in terms of said primary strategic objective measure;
- h. taking said first expected results and subtracting said second expected results to determine the impact of said activity and/or work that was removed in step f on said strategic objective measure;
- i. determining the new order and/or lot size that is consistent with said primary strategic objective by taking said impact found in step h and subtracting any fixed amount associated with said activity or work that was removed in step f in the same units of measure as said primary strategic objective measure and then dividing the result by the amount per unit or piece of said removed job, said

amount being measured in the same unit of measure as said primary strategic objective measure; and

j. re-running steps d through i above for each different job and/or order.

**Pending Claim 12:**

12. A apparatus for determining if proposed modifications to existing planned activities are supportive of and consistent with an entity's strategic objective, wherein said apparatus includes:

- a. user interface devices and modules operatively coupled to said apparatus;
- b. a memory that stores databases and computer-readable code;
- c. said databases including the original databases, modified original databases, interactive version of the said original databases and modified interactive databases;
- d. a processor operatively coupled to said memory, said processor configured to implement said computer-readable code, said code configured to:
  - i. receive, load and store a desired target value for a primary strategic objective into the said memory or storage medium of the said apparatus, said apparatus having containing or access to the said entity's said databases and MIS;
  - ii. receive, load and store the calculation for a said entity's primary strategic objective measure in the said memory or storage medium of the said apparatus;

- iii. modify the said existing planned activities not yet completed to be temporarily assumed to be completed over a planning period and temporarily store the said activity that is assumed completed in the said modified original databases in the said memory or storage medium of the said apparatus;
- iv. execute the said MIS, or a duplicate version of the said MIS, over the said planning period using the said modified original databases to calculate the first expected strategic objective results as measured by the said primary strategic objective measure calculation and store the said first expected results in the said memory or storage medium of the said apparatus;
- v. allow users to interact with the said interactive database version of the said original databases in order to modify the said interactive databases and store the said modified interactive databases temporarily in the said memory or storage medium of the said apparatus;
- vi. execute the said MIS, or a duplicate version of the said MIS over the said planning period using the said modified interactive databases to calculate the second expected results as measured by the said primary strategic objective measure calculation and store the said second expected results in said memory or storage medium of the said apparatus;
- vii. compare the said first expected results with the said second expected results to determine if the said modifications to the

said modified interactive database when compared to the said modified original databases resulted in improvements, deterioration or was impact neutral to the said strategic objective target value and store and/or output of the said comparison to the said memory, said storage medium and/or output devices of the said apparatus;

viii. over-write the said original databases by loading and storing the said modifications to the said interactive databases into the said original databases and/or the said MIS in the said memory or storage medium of the said apparatus if the said second expected results or the results of the said comparison between the said first expected results and the said second expected results indicated improvements over the said first expected results to the said strategic objective target value;

ix. prevent the said original databases in the said memory or storage medium of the said apparatus from being over-written with the said modifications in the said modified interactive databases if the said second expected results or the results of the said comparison between the said first expected results and the said second expected results indicated a deterioration from the said first expected results to the strategic objective target value;

and

x. either over-write or not over-write the said original databases in the said memory or storage medium of the said apparatus, the choice of over-writing or not over-writing to be

determined by the said entity, with the said modifications to the said modified interactive databases if the said second expected results or the results of the said comparison between the said first expected results and the said second expected results are impact neutral to the said first expected results and to the said strategic objective target value.

**Claim 7 (as presently amended) of application No. 10/710,384:**

7. (Amended) An apparatus for determining an entity's order and/or lot sizes that the entity purchases and/or produces consistent with and supportive of the entity's primary strategic objective, wherein said apparatus includes:
  - a. user interface devices and modules operatively coupled to said apparatus;
  - b. a memory that stores databases and computer readable code;
  - c. said databases including original databases and modified original databases;
  - d. a processor operatively coupled to said memory, said processor configured to implement said computer readable code, said code configured to:
    - i. receive, load and store the primary strategic objective measure in said memory or storage medium of said apparatus;
    - ii. modify the existing planned activities or work not yet completed to be temporarily assumed to be completed over a planning period and temporarily store said activities that are assumed completed in said modified original databases in said memory or storage medium of said apparatus;

- iii. executing the materials requirements planning (MRP), manufacturing resource planning (MRP II) and any other management information system (MIS) program(s) for said planning period using said modified original databases per the existing schedule and ordering rules to determine the first expected output of said MRP, MRP II and MIS;
- iv. determining the first expected results of said MRP, MRP II and MIS as measured by said primary strategic objective and store said first expected results in said memory or storage medium of said apparatus;
- v. removing one of said activities or work in said modified original databases in said memory or storage medium of said apparatus and re-running said MRP, MRP II and any other MIS program(s) for said planning period as if the remaining said activities and/or work were in fact already run per the modified original databases list and the said existing ordering rules to determine the second expected output of said MRP, MRP II and MIS;
- vi. determining the second expected results of said MRP, MRP II and MIS as measured in terms of said primary strategic objective measure and store said second expected results in said memory or storage medium of said apparatus;
- vii. taking said first expected results and subtracting said second expected results to determine the impact of said activity and/or work that was removed in step v on said strategic objective measure;
- viii. determining the new order and/or lot size that is consistent with said primary strategic objective by taking said impact and subtracting any fixed amount associated with said job that was removed in step v in the same units

of measure as said primary strategic objective measure and then dividing the result by the amount per unit or piece, in the same units of measure as said primary strategic objective measure, of said job that was removed;

ix. re-storing said removed activity or work into said modified database with the new said order and/or lot size and storing the new order and/or lot size into said original database in said memory or storage medium of said apparatus; and

x. re-running steps v through ix above for each different activity and/or work currently planned in the planning period.

**Pending Claim 23:**

23. A computer program embodied on a computer-readable medium for comparing a forecast of the expected results caused by the existing planned activities and a forecast of the expected results of any planned changes to the said existing planned activities in terms of a strategic objective measure in order to determine if the said planned changes are supportive and consistent with an entity's strategic objective, comprising a data structure instantiating code segment that establishes a storage record in memory having:

- a. a desired target value for the said strategic objective;
- b. a formula for calculating the said strategic objective measure;
- c. an original database, a modified original database containing data assumed completed over the upcoming planning period, an interactive database version of the original database and a modified interactive

database that contains the said planned changes to the original database and the data in the said modified interactive database is assumed completed over the said planning period;

d. a first expected results from the said formula for the said strategic objective measure as determined from the said modified original database that contains the said existing planned activities over the said planning period;

e. a second expected results from the said formula for the said strategic objective measure as determined from the said modified interactive database that contains the said planned changes to the said existing planned activities over the said planning period;

f. a difference between the said first expected results and the said second expected results; and

g. a feature for modifying the said original database of the said existing planned activities with the said planned changes to the said existing planned activities in the said memory if the said differences between the said first expected results and the said second expected results is an improvement to the said strategic objective measure and/or said target value or if the said second expected result is an improvement to the said strategic objective measure and/or said target value.

**Claim 13 (as presently amended) of application N0. 10/710,384:**

13. (Amended) A computer program embodied on a computer-readable medium for determining an order and/or lot size that the entity purchases and/or produces consistent with and supportive of the entity's primary strategic objective, wherein said determination comprises a data structure instantiating code segment that establishes a storage record in memory having:

- a. the calculations for the primary strategic objective measure;
- b. a first expected results of the existing activities and/or work as measured by said primary strategic objective measure calculated over a planning period as if said existing activities and/or work were already completed;
- c. a second expected results of the existing activities and/or work, less one of said existing activities, as measured by said primary strategic objective measure calculated over a planning period as if said existing remaining activities and/or work were already completed;
- d. the difference between said first expected results and said second expected results; and
- e. the new order and/or lot size as determined by taking said difference and subtracting any fixed amount associated with said removed job and dividing the result by any amount per piece or unit, wherein all said amounts are in the same units of measure as said primary strategic objective measure.

**Pending Claim 34:**

34. A device and system for determining if proposed modifications to existing planned activities are supportive of and consistent with an entity's strategic objective, said device and system comprising:

- a. a means for receiving, loading and storing the code for calculating a strategic objective measure into the memory or storage device of a computer that contains or can access an entity's original databases and MIS if the said strategic objective measure does not already exist within the said databases or said MIS;
- b. a means for receiving, loading and storing a desired target value for the said strategic objective measure into the said memory or storage medium of the said computer;
- c. a means for temporarily modifying the said original databases to assume that the activities yet to be completed have been completed over a planning period and storing the said modified databases in the said memory or storage medium of the said computer;
- d. a means for accessing the said MIS, or a copy of the said MIS, and utilizing the said modified databases to calculate the first expected results as measured by the said strategic objective measure over the said planning period and loading and storing the said first expected results in the said memory or storage medium of the said computer;
- e. a means for loading and storing an interactive version of the said original databases in the said memory or storage medium of the said computer, wherein users are allowed to modify the said interactive databases and then temporarily storing the said modified interactive

- databases into the said memory or storage medium of the said computer;
- f. a means for accessing the said MIS, or a copy of the said MIS, and utilizing the said modified interactive databases to calculate the second expected results as measured by the said strategic objective measure over the said planning period and loading and temporarily storing the said second expected results in the said memory or storage medium of the said computer;
- g. a means for comparing the said first expected results with the said second expected results to determine if the said modifications to the said interactive databases caused an improvement, a deterioration or was impact neutral to achieving the said strategic objective target value and temporarily storing and/or outputting the said comparison in the said memory, said storage medium and/or output device of the said computer;
- h. a means for accessing the said modifications to the said interactive databases and loading and storing the said modifications to the said interactive databases into the said original databases and/or the said MIS in the said memory or storage medium of the said computer if the said second expected results or the results of the said comparison between the said first expected results and the said second expected results was an improvement to achieving the said strategic objective target value;
- i. a means for preventing the said modifications to the said interactive databases from being loaded and stored in the said original databases

and/or the said MIS in the said memory or storage medium of the said computer if the said second expected results or the results of the said comparison between the said first expected results and the said second expected results was a detriment to the achievement of the said strategic objective target value;

j. a means for accessing the said modifications to the said interactive databases and either loading and storing or not loading and not storing, the choice of loading and storing or not loading and not storing to be determined by the said entity, the said modifications to the said interactive databases into the said original databases and/or the said MIS in the said memory or storage medium of the said computer if the said second expected results or the results of the said comparison between the said first expected results and the said second expected results was impact neutral to achieving the said strategic objective target value; and

k. a means for periodically loading and storing the said modifications to the said interactive database into the said modified database and into the said interactive database if the said modifications were loaded and stored in the said original databases and repeating c, d, e, f, g, h, i, and j above.

**Claim 19 (as currently amended) of application No. 10/710,384:**

19. (Amended) A device and system for determining an entity's order and/or lot sizes that the entity purchases and/or produces consistent with and

supportive of the entity's strategic objective, said device and system comprising:

- a. a means for receiving, loading and storing the calculations for the primary strategic objective measure in said memory or storage medium of said device;
- b. a means for modifying the existing planned activities or work not yet completed to be assumed to be completed over a planning period and storing said activity that is assumed completed in said modified original databases in said memory or storage medium of the device;
- c. a means for executing the material requirements planning (MRP), manufacturing resources planning (MRP II) and any other management information system (MIS) program(s) for said planning period using said modified original databases per the existing schedule and ordering rules to determine a first expected output;
- d. a means for determining the first expected results of said first expected output as measured by said primary strategic objective measure and storing said first expected results in said memory or storage medium of said device;
- e. a means for removing one of said activities or work in said modified original databases in said memory or storage medium of said device and re-running said MRP, MRP II and any other MIS program(s) for said planning period as if the remaining said activities and/or work were in fact already run per the modified original databases list and said existing ordering rules to determine a second expected output;
- f. a means for determining the second expected results of said second expected output as measured in terms of said primary strategic objective

measure and storing said second expected results in said memory or storage medium of said device;

g. a means for taking said first expected results and subtracting said second expected results found to determine the impact of said activity and/or work that was removed in step e on said strategic objective measure;

h. a means for determining the appropriate new order and/or lot size that is consistent with said primary strategic objective by taking said impact and subtracting any fixed amount associated with said job that was removed in step e in the same units of measure as said primary strategic objective measure and then dividing the result by the amount per unit or piece, in the same units of measure as said primary strategic objective measure, of said job that was removed;

i. a means for re-storing said removed activity or work into said modified database with the new said order and/or lot size and storing the new order and/or lot size into said original database in said memory or storage medium of said device; and

j. a means for re-running steps e through i above for each different activity and/or work currently planned in the planning period.

As to present Claim 1 and the ‘384 claim 1, the preambles state respectively: “A method for determining if proposed modifications to existing planned activities are supportive of and consistent with an entity’s strategic objective, comprising the steps of:” versus the preamble of claim 1 of application No. 10/710,384, which states: “A method for determining order and/or lot sizes that are consistent with an entity’s primary strategic objective, comprising

the steps of:”. The former goes specifically to determining how proposed modification to planned activities and will affect an entity’s strategic objective. The latter is a method for determining what an order quantity or lot size should be to support the strategic objective of a company. As to reciting common subject matter, the only steps that do so are steps “a through c” of both claims, (selecting a primary strategic objective and measure). The remaining steps of the present claim 1, d through p, are different than steps d through j of the ‘384 claim 1 and end with completely different results. The present claim 1 determines the impact of a proposed action on the strategic measure, prior to the proposed actions implementation – it does not determine an optimal lot or order size. The ‘384 claim 1 uses the strategic objective measure to determine what the optimal lot or order size should be to optimize the elected strategic measure. Thus, a user could use the present invention to move a selected scheduled job out of order and determine what the impact of that move would have on the strategic measure and/or goal – either good or bad, prior to actually moving the job out of order. While the ‘384 uses the strategic measure to determine the optimal lot sizes based upon the strategic measure. If a user used the ‘384 method to determine the optimal lot size, they could then use the present application to change the optimal lot size and then determine what the impact of that change would be prior to implementing a change to the optimal lot size. These are different and distinct issues and activities and do not recite common subject matter.

As will be seen by reviewing claims 12 versus 7, 23 versus 13 and 34 versus 19, above, the claims of one do not anticipate the other, but accomplish completely different objectives and ends.

Claim 1 of the present application is also rejected for obviousness-type double patenting by co-pending application 10/710,385, claim 1 which is presented below for reference.

**Claim 1 (as currently amended) of application 10/710,385:**

1. (Amended) A method for scheduling independent and dependant jobs and/or work consistent with an entity's strategic objective, wherein said method comprises the steps of:
  - a. defining a plurality of strategic objectives;
  - b. prioritizing said strategic objectives;
  - c. selecting the primary strategic objective from said prioritized strategic objectives;
  - d. listing a plurality of measures for said primary strategic objective;
  - e. selecting one of said measures from said list of a plurality of measures to be the primary strategic objective measure;
  - f. listing a plurality of measures to be used for scheduling said jobs and/or work consistent with said primary strategic objective measure;
  - g. selecting a primary measure for said scheduling of said jobs and/or work consistent with said primary strategic objective measure from said listing of said plurality of measures to be used for scheduling said jobs and/or work;

- h. listing a plurality of constraints categories for scheduling said jobs and/or work;
- i. selecting a constraint category from said list of a plurality of constraint categories by which said jobs and/or work will be scheduled;
- j. listing a plurality of constraints within said selected constraint category and prioritizing the order of said constraints within said selected constraint category to schedule said jobs and/or work by;
- k. using said primary measure for said scheduling of said jobs and/or work, calculate said work schedule measure for each said job and/or work in the work queue for the first said prioritized constraint within said selected constraint category;
- l. prioritizing said calculated work schedule measures in (k) above by largest work schedule measure first for said first prioritized constraint;
- m. scheduling all of said independent jobs and/or work by said prioritized calculated work schedule measures, then scheduling all of said dependant jobs and/or work by said prioritized calculated work schedule measures; and
- n. repeating steps k through m for each said prioritized constraints until all of said prioritized constraints and all of said jobs and/or work have been scheduled.

As to present Claim 1 and the ‘385 claim 1, the preambles state respectively: “A method for determining if proposed modifications to existing planned activities are supportive of and consistent with an entity’s strategic objective, comprising the steps of:” versus the preamble of claim 1 of application

Serial No. 10/710,396 – McCormick, John K.

Attorney Docket 100

Response to August 18<sup>th</sup>, 2009 Office Action

Page 31 of 194

number 10/710,385, which states: “A method for scheduling independent and dependant jobs and/or work consistent with an entity’s strategic objective, wherein said method comprises the steps of:”. The former goes specifically to determining how proposed modification to planned activities and will affect an entity’s strategic objective, as was stated above. The latter goes toward a method for scheduling work consistent with the strategic objective. As noted above, the only common matter is in the identification and selection of the strategic objective and measure. The present application looks at evaluating what a proposed action would have on a strategic measure while the latter uses the strategic measure to optimize the schedule of work to the strategic measure and/or goal. These are different and distinct issues and activities and do not recite common subject matter.

**Marked-Up Copy of the Amended Specification:**

## **BACKGROUND OF THE INVENTION**

In almost all industries and endeavors, whether that endeavor is manufacturing, service, governmental or otherwise, the leaders of a given endeavor develop strategic plans which are used to lead and guide the people engaged in the endeavor. Basically, strategic plans are a set of objectives the leaders desire to pursue and achieve in order to be successful in their pursuits.

The strategic objectives developed are as varied and distinct as there are number of entities. Each entity develops their own strategic objectives based upon their knowledge and beliefs about their industry, their business and their resources. However, many strategic objectives will relate in one form or another to such common concerns as increasing sales, reducing costs, complying with industry regulations, reducing injuries, developing new products, services or markets, reducing lead-times for shippable products, improving profits and/or a host of other objectives that the leaders expect will improve their position financially and within their industry. Some companies also develop strategic objectives based upon being responsible corporate citizens and on being environmentally active.

Most strategic plans are developed on a yearly basis typically concurrent with the financial cycle, probably because the financial books of

an entity are based upon a twelve month cycle for financial and tax reasons. Some entities also have long range strategic plans going out 4, 5 or more years and mid-range plans that go out 2 to 4 years. However, the yearly strategic planning cycle is pretty much universally used by most entities.

In most entities the strategic objectives are further broken down into more specific goals that the company and/or individual areas within the company are expected to achieve. For example, if an entity had as its primary strategic objective to increase profitability, the sales department may have a goal to increase overall sales by 10%, engineering may have a goal to develop and introduce three new products by year end, claims processing might have a goal to improve the speed of processing claims, maintenance may have a goal to reduce maintenance costs while maintaining up time of the equipment, and so on. Once the area or departmental goals are established, those areas then develop their action plans with the steps that they believe must be taken in order to achieve the departmental or area goals, and subsequently support and achieve the strategic objectives.

Once the strategic plan, with objectives, goals and action plans, are in place, the organization works to implement those plans throughout the coming year. Meanwhile, on a daily basis, the rest of the organization is going about the process of running the day-to-day business. For most entities, this is typically done by utilizing a computerized Management Information System (MIS). These MISs are, in a very broad sense, similar from industry to industry and company to company. Whether the industry is

banking, health care, insurance, investment management, manufacturing, service, government or any other entity, the MISs are designed to acquire, store, manipulate and output the information deemed relevant to the industry and the specific user.

For example, in the health care industry, the MIS may contain information on such things as patients, health care professionals, medication inventory and usage, costs, incomes, patient care records, compliance records and a host of other information deemed relevant for treating the patients and for managing the business. Similarly, a bank may have an MIS that contains information on such categories as customers, employees, assets, liabilities, income, expenses, investments, compliance records, investment options and performance, loans outstanding and so on for information deemed relevant to satisfying their customers and to effectively manage the business. As another example, manufacturing will typically have such information as current, historical and forecasted sales levels, customer information, supplier information, inventory availability, production performance records, product costs, financial records, human resource records and a host of other data contained within their MIS related to serving their customers and managing their business. In each of these industries, and others, the MIS contains the databases and software used to manipulate the data in order to provide relevant informational outputs.

These MISs are all similar in many ways. They will all have financial modules for tracking and recording the financial affairs of the entity. The

MIS will have modules for scheduling and tracking work whether that work is check processing, loan processing, patient scheduling, inventory and distribution of goods and/or services, manufacturing or any other kind of work. They may also have means for entering and tracking sales, warranties, human resources issues and other specific categories of interest related to any given concern. These systems are well known and well practiced in the art. Unfortunately, they all suffer from the same maladies and inconsistencies.

While an entity will have a strategic plan with strategic objectives, goals, and an operational plan and/or action plans, the entity is also operating the day-to-day business based upon the existing MISs. Unfortunately, the MISs have been around for a substantial period of time and the parameters under which they operate are, for the most part, fixed based upon previously defined perceptions of what was important to manage the entity by. As a general rule, that fixed parameter has been costs.

For example, in a manufacturing environment there is what is called a Manufacturing Resource Planning module (MRP II) as a part of the MIS. This module performs a number of functions, one of which is to determine the number of parts to run in a given work order. The answer of how many parts to run in a given order is determined by the Economic Order Quantity (EOQ). Basically, the EOQ balances the cost for setting up and running the part against the cost of carrying excess inventory over time. By balancing these costs, the manufacturing company arrives at the optimal lot run size to

keep costs at a minimum. Similarly, a distribution company will have modules for the purchasing and inventorying of goods that it distributes using the EOQ formula or a slightly modified EOQ in order to minimize their purchasing costs by balancing those costs with the inventory carrying costs. The distribution company will also closely monitor the sales and turnover of the goods in inventory. The greater the inventory turns, the less inventory investment cost there is to the company.

Similar cost containment issues are found when one looks at the banking industry, health care, insurance, stock brokerages, and other industries. The existing MISs are embedded with fixed parameters for providing guidance and recommendations on the day-to-day decisions of the endeavor, independent of the strategic objectives. The result of this is that while an entity may have defined their strategic objective as increasing market share, or improving profits or any other strategic objective other than reducing costs, the rest of the organization is going about their day-to-day business making decisions based upon an MIS that is structured to allocate work and to make recommendations based primarily upon cost containment.

Twenty years ago, cost control was a significant and vital part of any entity's strategic plans. However, with the advent of international trade agreements such as NAFTA, the shift to the globalization of business and work, and the changes brought on by improvements in telecommunications, internet business and new technology, many businesses have had to significantly change their strategic plans to accommodate for the changed

business and competitive structures. That change has continued and will continue, forcing organizations to continually adapt and change their business strategies.

For example, in the United States a manufacturer or distributor today may be paying \$15.00 to \$25.00 or more per hour for a laborer, while in China that same laborer is getting paid less than \$1.00 per hour. Obviously, given the wage rate, there is very little likelihood that a United States company can compete with an identical company located in China on costs. As a result, many companies have switched their primary strategic focus from cost reduction to some other strategic advantage.

One such switch was for companies to focus on reducing quality problems. Another switch was to focus on reducing lead-times to customers without adding inventory. Another switch was to strategically focus on improving profitability. These and many other strategic direction changes have significantly changed how business is operating and what they are pursuing in order to survive and grow their businesses.

However, for all of these changes and redirections of a company's strategic plan and focus, the IMS underlying the day-to-day activity of the business has remained virtually unchanged. For example, MRP II is unchanged and the use of the EOQ is still being applied to keep costs low and drive the daily decisions on how many goods should be ordered or produced even when the primary strategic direction is something other than

keeping costs low. In fact, the use of an EOQ when a company's strategic direction is something other than lowering costs many actually hinder the company's efforts to achieve their strategic objectives.

The result of this is that the MISs are providing information and direction to people on a daily basis that is not consistent with the strategic direction of the entity. In many cases, the MIS does not provide for any recommendations relative to the strategic objective of the company. A couple of examples will be presented here for clarification purposes. For the first example, we will start by assuming there is a distribution company that has as its primary strategic objective the goal of reducing lead-times of customer's orders, under the assumption that reduced lead-times would result in greater profits caused by increased sales. In the distribution company, as in all industries, the sales group is responsible for getting sales orders into the company. The sales modules within a distribution company's MIS are designed and setup for the sales department to input new sales orders, track the status of orders, monitor sales in a variety of ways and provide many other functions related to the activity of sales. However, nowhere in the MIS sales module, or anywhere else in the MIS, is there a means to look at the impact of a given sales order on the company's primary strategic objective. The MIS does not provide for a means for looking at the probable impact that a single order would have on the company's lead-times before the order is accepted and implemented. Worse yet, even after the order has been accepted, processed and shipped there is still no means to determine the impact that a given order had on the company's primary

strategic objective of reducing lead-times. This is true for any strategic objective a company might have with the exception of a strategic objective to increase sales orders, since that is primarily what the sales module in the MIS tracks.

As a second example, a production area in a manufacturing company that has as its primary strategic objective the goal of increasing profits will be utilized. In the production area, the employees receive from the MIS a proposed production schedule typically generated by an MRP II module. This module is designed to schedule work based upon scheduling the oldest order first, whether or not that helps to increase profitability or reduce it. In addition, once the production area receives the planned schedule, the employees review the schedule and change it, sometimes many times during a single work shift. There are many reasons for these schedule changes. Equipment can be inoperable, people that were scheduled to work did not show up or, in many cases, the people look at the schedule and see that there are a variety of jobs that are very similar to each other and some that are very different for each other. In order to be more efficient and productive, which is what the production areas are held accountable for, they change the schedule to put similar jobs together in order to reduce setup and changeover time. Unfortunately, they have no means for determining the impact of these proposed changes on the primary strategic objective of increasing profitability, either before or after they implement the change.

In addition, there are many occasions when the sales group in a manufacturing business gets in a customer order and, for whatever reason, they want to have that specific order moved up in the production schedule. Since there is presently no means for analyzing the potential impact on the primary strategic objective of increasing profitability before implementing that change, and no means to evaluate the actual impact after the change, the actual decision of whether to change the schedule or not revolves on either teamwork, politics or power, not on whether pushing that sales order up in the schedule supports the primary strategic objective of improving profits or not.

Many other examples could be provided in all kinds of businesses and endeavors including banking, health care, insurance, brokerages, government, educational institutions and so on. The fundamental problem with the current MIS being used in any endeavor is that the MIS provides no means for evaluating the impact of any proposed action on the strategic objectives of the entity. As such, hundreds of decisions and actions are being made daily that work against an entity's strategic objectives.

In addition, outside of the strategic objectives and other planning activities, entities are constantly looking at other endeavors that might possibly improve the position of their business or activity. They might be looking at acquiring a competitor, or acquiring a business with a complimentary product line. They may be looking at relocating, or opening up branch offices nationally or internationally. They may be looking at

adding floor space or additional capacity in an existing facility.

Unfortunately, this too is typically looked at only from a financial aspect. That being, what are the associated costs and what will the expected returns be. If an entity has a long range strategic objective of gaining 75% of a given market, each and every one of the aforementioned activities may help contribute to achieving that objective. However, each and every one of those same activities may just as likely contribute to not achieving that long term objective. There is no process or means within existing MISs to input the proposed activities and see what the probable outcome of those activities are on the long term strategic objective prior to implementing them.

A technical problem in connection with strategic planning or operational planning and the daily activities is that there is no knowledge of an effective means for forecasting the probable results of the current planned daily work and comparing that result to some proposed change to the existing daily work in a mode that ties the results of those two differing actions to the strategic objective of the entity, and as such there is no way to know which of the actions is most supportive of the strategic objective of the entity prior to making a decision as to which action should be implemented. Furthermore, there is no technical way look at the proposed actions after they are implemented to determine how those actions impacted the strategic objective in any substantive way since there is no means by which the results of the implemented actions can be compared to the original actions that were not implemented. Therefore, there exists a demonstrated need for a system that is able to look at the proposed actions that an entity may be considering

for implementation and evaluate those actions against the entities existing work and their strategic objectives or business goals in a manner that evaluates the probable results of executing the existing work and the probable results of proposed actions as against the strategic objectives or business goals that the entity deems important.

## **SUMMARY OF INVENTION**

Accordingly, a need has arisen for a reliable system and a method for evaluating proposed daily and/or long term actions based upon a given action's probable impact on the strategic objectives or goals of the entity. The present invention provides such a system and method by incorporating the entity's existing databases and MIS along with new databases and new software modules. Operatively, the invention forecasts the expected results of the current state of the business process for which a change is desired. An interactive module then allows a user to input the desired changes into the interactive module and forecast the expected results of the modified business process. Comparing the two expected results against each other in the same measure that is directly or indirectly related to the strategic objective or goal provides a means to evaluate how the proposed changes would most likely impact the strategic objectives.

Additional improvements derive from this invention with the addition of a means for monitoring the possible tradeoffs that come with any

proposed business process change and placing tradeoff threshold limits on these tradeoffs. This provides a means for balancing the improvements that might arise from a given business process change with the tradeoffs associated with a given business process change.

An additional improvement derives from this invention by the optional use of ranges for the strategic objectives or goals and/or the use of ranges for the tradeoff threshold limits. This improvement allows users a window or area to operate in while making their decisions, rather than through the use of absolute targets.

Another additional improvement is the optional use of varying levels of the ranges within which various users can be authorized to act within, those levels being constrained by the level of authority the individual user is allowed and the levels set for the strategic objectives or goals and the levels set for the tradeoff threshold levels.

## **BRIEF DESCRIPTION OF THE DRAWINGS**

For a further understanding of the nature and objects of the invention, reference should be made to the following description and appended claims, taken in conjunction with the accompanying drawings, in which like elements are given the same reference numbers. It is to be understood that these drawings depict only the typical embodiments of the invention and are,

therefore, not to be construed as limiting the scope and spirit of the invention.

**Fig. 1** provides an overview of the general topology of the invention;

**Fig. 2** illustrates an apparatus in accordance with the present invention;

**Fig. 3** is a flow chart describing an means for aligning work to be consistent with and supportive of the strategic objectives; and

**Fig. 4** is a flow chart of an alternated means for aligning work to be consistent with and supportive of the strategic objectives.

## **DETAILED DESCRIPTION OF THE INVENTION**

To facilitate the description of the invention, it is worthwhile to define some terminology solely for this purpose. This terminology is somewhat arbitrary and should not be construed as limiting the generality of the invention. For the purposes of this description:

1. Strategic objective are meant to include any and all desired goals, end results, improvements and/or directions that the entity desires to move toward and/or achieve. Strategic objective is meant to include both the singular and plural sense of the word.
2. Planning period is a time frame meant to include the existing orders or work schedule, however the planning period could use or include the current forecastable planning period and/or any other

planning period, including a historical planning period, chosen by the user.

3. Tradeoffs are meant to include any and all possible negative consequences that might, or in fact do, occur as a result striving to achieve the strategic objectives. In the alternative, a tradeoff could be a positive result that occurs even though the proposed action has a negative or insignificant effect on the strategic objective measure. A tradeoff can also include secondary or alternative strategic objectives.

4. Tradeoff threshold is meant to mean a desired limit for the tradeoff for which the tradeoff measure value is not to cross over or exceed.

5. Work is meant to include any endeavor that the entity puts resources into in order to accomplish some desired result. Work could be such things as consulting, legal aid, purchasing, check processing, health care, production, filming art and a myriad of other activities.

Reference will now be made in detail to the description of the invention as illustrated in the drawings. Although the invention will be described in connection with these drawings, there is no intent to limit the invention to the embodiment or embodiments disclosed therein. On the contrary, the intent is to include all alternatives, modifications and equivalents included within the spirit and scope of the invention as defined by the appended claims.

Furthermore, the order of the itemized steps in **Fig. 3** and **Fig. 4** are not meant to limit the scope of the invention to the specific itemized order of

those steps, but rather to include those steps in any relevant order including any alternatives, modifications and equivalents included within the spirit and scope of the invention as defined by the appended claims.

To aid in the understanding of the invention, examples of some of the specific itemized steps are provided for clarification purposes only. These examples are not meant to limit the invention to the method disclosed or to the businesses used in the examples, but rather to include any entity and any alternative, modification and equivalents included within the spirit and scope of the invention as defined by the appended claims.

**Fig. 1** illustrates the overall topology of an organizational entity **1** depicting the primary elements and/or interactions relevant to the invention. The five main elements in the organizational entity **1** are the strategic plan **2**, the organizational structure **6**, the Management Information System (MIS) **10**, the daily business activity **12** and the system for evaluating the impact of proposed actions **15** on the strategic objective and measures **3**. Internal to the organizational entity **1** is the strategic plan **2**. The strategic plan **2** consists of strategic objectives and measures **3**. From the strategic objectives and measures **3**, corporate and departmental action plans **4** are developed.

The organizational structure **6** is responsible for two distinctly different activities. One of those activities is to implement the strategic plan **7** and the other is to manage that daily business activity **8**. In order to

implement the strategic plan **7** and strive to achieve the strategic objectives **3**, information, decisions and data flows **5** both ways between the organizational structure **6** and the strategic plan **2**. Similarly, in order for the organizational structure **6** to manage the daily business **8**, information, decisions and data flows **9**, **11** and **13** both ways between the organizational structure **6** and the MIS **10**, between the organizational structure **6** and the daily business activity **12** and between the MIS **10** and the daily business activity **12**. Obviously, relevant information on implementing the strategic plan **7** and managing the daily business **8** is shared by the organizational structure **6**. However, in the existing organizational structure **6**, there is no means for evaluating and/or analyzing the shared information to assure that the management of the daily business **8** is supporting and consistent with the implementation of the strategic plan **7**.

According to this invention, a system for evaluating proposed actions **15** is put in place wherein proposed actions from the daily business activity **12** can be sent **14** to the system for evaluating the proposed actions **15**. The system for evaluating proposed actions **15** then gathers **16** data and information from the strategic objectives and measures **3** and gathers **17** data and information from the MIS **10**. In a very broad sense, the details of which will be explained later, the system for evaluating proposed actions **15** then evaluates the existing actions and the proposed actions in light of the strategic objective measures **3** and provides guidance or direction as to the implementation or non-implementation of the proposed actions which flows **14** back to the daily business activity **12**. The guidance or direction is also

provided **17** to the MIS **10**. The guidance or direction from the system for evaluating proposed actions **15** flowing **14** and **17** back to the daily business activity **12** and the MIS **10** can also flow **13** and **9** back to the organizational structure **6** through the MIS **10**, or in the alternative directly (not shown), for reporting, tracking and/or evaluation by the organizational structure **6**.

In an alternate embodiment (not shown) the organizational structure **6** responsible for implementing the strategic plan **7** and for managing the daily business **8** could also input proposed actions into the system for evaluating proposed actions **15** in order to evaluate the proposed actions impact on the strategic objective measures **3** prior to implementing the proposed actions.

**Fig. 2** illustrates a system for evaluating proposed actions **15** for the probable and potential impact a given action would have on a strategic objective of an organization, or on any other goal of an organization in accordance with the present invention. The apparatus **18** used to determine the impact of proposed actions on the strategic objective or a goal may be embodied in any computing device, such as a personal computer or work station, as modified to carry out the features and functions of the present invention. As shown in **Fig. 2**, the system contains a processor **19**, such as a central processing unit (CPU), and memory **20**, such as RAM and ROM. Stored in the memory **20** are the existing or original databases **21** and the Management Information System (MIS) **22**. Within the MIS **22** are a variety of software modules or programs (not shown) used in the course of the

entity's endeavors. Also included in the memory **20** are additional new databases **23** and the new modules **24**.

In an alternative embodiment, multiple computing devices **18** could be utilized to host and accomplish whole parts, or individual portions, of the processor **19**, memory **20**, existing or original databases **21**, MIS **22** software, new databases **23** and/or the new modules **24** so long as the multiple computing devices **18** were operably connected.

As shown in **Fig. 3**, the process for determining the impact a given action may have on a strategic objective starts with establishing the strategic objectives **25** for the organization. In its preferred embodiment, once the strategic objectives **25** are defined, the organization's strategic objectives **25** are prioritized **26** and a primary strategic objective measure and/or goal **27** identified. Following the determination of the primary strategic objective measure and/or goal **27**, a list of possible measures **28** for the primary strategic objective measures and/or goal **27** are developed and the primary strategic objective measure **29** for the primary strategic objective measure and/or goal **27** is selected.

Next the existing or original databases **21** and MIS **22** are accessed and the existing databases temporarily reset **30** as if the work in the planning period has in fact been completed per the existing MIS **22** structure. In an alternate embodiment, the existing or original databases **21** could be copied to a new set of databases **23** and this new set of databases reset **30** as if the

work had already been completed for the planning period. In either event, the MIS **22** or a copy of the MIS **22** in the new modules **24** is then run and the first expected strategic objective results calculated **31** using the primary strategic objective measure **29** and using the reset databases **30** for the desired planning period.

For example, if the primary strategic objective measure and/or goal **27** was to reduce the lead-times to customers and the primary strategic objective measure **29** was number of days from customer order to customer shipment, then the existing or original databases **21** could be copied to a new set of databases **23**. The new databases **23**, including the work schedules, inventories, job routings, planned purchases and so forth could be reset **30** as if the work had been accomplished per the existing MIS **22** software routines. All of the financial reports, production reports, shipping reports and so on could be then calculated **31** as if the work had actually been completed and the expected lead-times for customer orders could be forecasted and stored in the new databases **23**.

The next step is to create an interactive version of the databases wherein people are allowed to temporarily change the interactive databases **32**. When an entity proposes to make a change to the existing database, they input those changes to the interactive database and then run the relevant MIS **22** modules as if those changes had actually been made and the work was completed. From this, the second modified expected strategic objective results **33**, as measured by the primary strategic objective measure **29**, as

well as the set of financial reports, production reports, shipping reports and so on could then be calculated **33** as if the changed work had actually been completed.

The first expected strategic objective results **31** could then be compared **34** to the second modified strategic objective results **33**. If the proposed changes are an improvement **35** as measured by the primary strategic objective measure **29**, then the process would allow the proposed changes to over-ride the original databases with the proposed changes **37**. If the proposed changes did not show an improvement **35** as measured by the primary strategic objective measure **29** then the proposed changes would not be allowed to over-ride the original database **36**.

Continuing with the prior example of reducing lead-times for customer orders, if a sales department wanted to push in a specific sales order they just brought in and rush it to the customer by putting it ahead of other orders already in the work schedule, they could access the interactive databases, reschedule the specific job ahead of other planned work, and run the relevant MIS. This would then provide them with the expected results to lead-times resulting from the changed schedule. This second expected result could then be compared to the first expected results from the earlier MIS run. If the change was lead-time neutral or provided an improvement to lead-times, the change could be implemented into the original schedule. If the result was a detriment to improving lead-times, then the change would not be permitted.

The actual timing of the first MIS run on the existing databases to calculate the first expected strategic objective results **31** could be run at any time. This run is utilized to create the standard against which any other proposed changes or modifications to the databases can be compared. As such, this first run could be done prior to work starting, it could be re-run every hour or after any accepted proposed change or whenever else it is so desired.

The proposed changes to the interactive databases and the running of the MIS **33** using the modified interactive databases should be run in such a manner that the feedback is prompt. Since the first expected results **31** are already known, it is a simple matter to have the apparatus and process compare the first and second expected results **31** and **33** and provide a means for the user to know if the proposed modifications are accepted or rejected. The acceptance or rejection of any proposed change could be signified in a variety of ways such as color coding, providing the actual forecasted improvement or detriment, or through a variety of other means.

In an alternate embodiment, shown in **Fig. 4**, additional steps are added to the software and the process. Following the step of selecting the primary strategic objective measure and putting the measure in place **29**, the step of identifying the tradeoffs to the primary strategic objective are defined **38**. Next, the tradeoffs are prioritized **39**, and the primary tradeoff selected **40**. The possible tradeoff measures are identified **41** and the primary

tradeoff measure selected and put in place **42**. In its preferred embodiment, a threshold for the primary tradeoff is established **43**.

Continuing with the prior example, the possible tradeoffs **38** to the primary strategic objective **29** of improving lead-times could be such things as not increasing the inventory levels, maintaining the existing product and/or service cost structures, not losing sales volume, assuring that some orders are not put on semi-permanent hold status, or some other tradeoff. If the primary tradeoff **39** was selected as not increasing inventory and the dollar value of inventory was chosen as the tradeoff measure **42**, then there could be a threshold value **43** as to how much of an increase would be acceptable as long as the primary strategic objective **29** was achieved. For example, if the primary strategic objective **29** was to reduce lead-times by five days, the tradeoff threshold **43** could be zero dollar increase in inventory, or it could be that a \$5000.00 increase in inventory would be deemed acceptable, or some other number.

In an alternate embodiment, the tradeoff **39** could be a positive result to the entity even though the proposed action is a detriment to the primary strategic objective **29**. For example, if the proposed action caused an increase in the lead-times by one day, but the overall profit increased by \$5000.00 or more, then the action could be allowed even though it results in a detriment to the primary strategic objective **29** of reducing lead-times.

The tradeoff measures **41** recognize that there are always two sides to a coin. In striving to achieve one objective, one should not be blind to the methods and consequences used to achieve those objectives. There is a balance to be arrived at in defining what, or how much, one is willing to give up on the one hand, in order to achieve the primary strategic objective **29** on the other hand.

Continuing with **Fig. 4**, after the step of running the MIS to calculate the first expected strategic objective results **31**, the step of using the modified databases to calculate the first expected tradeoff results **44**, as measured by the primary tradeoff measure **42**, is added. Then, after the step wherein a proposed change to the interactive databases is made and the second expected strategic objective results are calculated **33**, the step of using the modified interactive databases and the prior MIS run to calculate the second expected tradeoff results **45**, as measured by the primary tradeoff measure is added.

After the next step of comparing the first strategic objective results with the second strategic objective results **34**, the step of comparing the first expected tradeoff results with the second expected tradeoff results **46**, based upon the primary tradeoff measure **42**, is added to the process. Then, if the second expected strategic objective results show an improvement, when compared to the first strategic objective results **35**, then the step of determining if the difference between the first and second tradeoff results exceeds the predefined tradeoff threshold measure **47** is added. If the

tradeoff threshold measure is exceeded, then the step of not allowing the proposed database changes to over-ride the original data base **48** is added. If the difference between the first and second tradeoff measure results does not exceed the tradeoff measure threshold, then the proposed databases changes are allowed to over-ride the original databases **37**.

In a further embodiment, the operational objectives and goals could be substituted for the strategic objectives and goals. In another embodiment, the objectives, goals and/or tradeoff thresholds could be defined as a range of values, by the user or entity, rather than an absolute objective goal and/or threshold. For example, the goal of reducing lead-times could be three to seven days reduction rather than the five day reduction used in the earlier example. Similarly, the threshold of no more than \$5000.00 of increase to inventory could be set as no more \$3000.00 to \$5000.00 of increase in inventory. In another alternative, the tradeoff threshold could be set as a ratio of the desired goal to the tradeoff threshold such as no greater than \$1000.00 of increased inventory for every one day of lead-time reduction. Other variations and alternatives would be obvious to a practitioner skilled in the art.

As another alternate embodiment, the apparatus and the process could be set up such that there are varying levels of tradeoff thresholds and over-rides to the proposed allowance or non-allowance of any proposed changes to the original databases based upon the level of responsibility and/or authority of the individual. For example, an operator may have a very low

threshold for which they may not be allowed to over-ride while a supervisor and a manager may have a much higher threshold within which they may operate. In our prior example the threshold for increasing inventory may be limited at only \$50.00 for the operator, but could be set at \$400.00 for a supervisor and \$1000.00 for a manager. Thus, differing levels within the organization would have differing authority levels on which they could impact the strategic direction and the tradeoffs the entity is attempting to manage.

While in the foregoing specification specific examples were used for illustration purposes, it will be understood that the present invention is not to be limited by those examples and that many of the process steps defined in the specification can be rearranged, modified, partly eliminated or varied considerably without departing from the scope and spirit of the invention.

It is to be understood that the embodiments and variations shown and described herein are merely illustrative of the principles of this invention and that various modifications may be implemented by those skilled in the art without departing from the scope and spirit of this invention. The spirit of the invention is to establish a means for evaluating and aligning a entity's proposed actions with its strategic objective such that the business activity's operational side of the entity is supporting and consistent with the strategic direction of the entity.

There are many significant and profound benefits that result from the present invention, only a few of which are listed below. As one example, it now becomes possible to tangibly evaluate, compensate and/or reward individuals whose efforts are consistent and supportive of achieving the strategic objectives of an entity, without regard to personal opinion or intangible and non-objective evaluations. The sales force can now be compensated on their tangible and measurable ability to support and achieve the strategic objectives of the entity rather than how much sales they bring in. As another example, an enormous amount of management and leadership time can now be freed up to do other management activities since their time will no longer be consumed with most of the daily decision making issues as the employees can tangibly test any changes they may want to pursue to evaluate the probable outcomes as it relates to the entity's strategic objectives prior to implementing the proposed changes. This enables the employees to know if their proposed changes are supportive the entity's strategic objectives or not, without consuming managements time in the daily decision making process. An added benefit of this is that the employees gain more decision making ability, however, that ability is constrained by the requirement of only making decisions that support the strategic objective of the entity.

As another example, many of the issues that consume management's time today involves multiple departments and managers debating over possible decision options and alternatives while each manager is trying to optimize their own area of responsibility. The invention presented will

Serial No. 10/710,396 – McCormick, John K.

Attorney Docket 100

Response to August 18<sup>th</sup>, 2009 Office Action

Page 58 of 194

eliminate much of that discussion and debate as it is now easy to see and verify the impact of possible decisions on the strategic objective of an entity without getting bogged down in individual area concerns, politics or priorities. On a larger scale, this invention allows for executives or managers to evaluate possible long term strategic actions, such as adding facilities, acquiring a competitor or other issues, on the probable strategic results of those actions over a longer period of time. Other benefits would be apparent to one skilled in the art.